

Series AM1PS-NZ

1 Watt | DC-DC Converter



FEATURES:

- Unregulated
- 8 Pin DIP Package
- Low ripple and noise
- High efficiency up to 82%
- Operating temperature -40°C to + 105°C
- Input / Output isolation 1500 VDC
- Pin compatible with multiple manufacturers
- Continuous Short Circuit Protection ‡

Models

Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max. Capacitive Load (µF)	Efficiency (%)
AM1PS-0303S-NZ	2.97-3.63	3.3	303	1500	220	75
AM1PS-0305S-NZ	2.97-3.63	5	200	1500	220	80
AM1PS-0503S-NZ	4.5-5.5	3.3	303	1500	220	76
AM1PS-0505S-NZ	4.5-5.5	5	200	1500	220	80
AM1PS-0509S-NZ	4.5-5.5	9	111	1500	220	80
AM1PS-0512S-NZ	4.5-5.5	12	84	1500	220	81
AM1PS-0515S-NZ	4.5-5.5	15	67	1500	220	81
AM1PS-0524S-NZ ‡	4.5-5.5	24	42	1500	220	81
AM1PS-1203S-NZ	10.8-13.2	3.3	303	1500	220	76
AM1PS-1205S-NZ	10.8-13.2	5	200	1500	220	80
AM1PS-1209S-NZ	10.8-13.2	9	110	1500	220	80
AM1PS-1212S-NZ	10.8-13.2	12	83	1500	220	81
AM1PS-1215S-NZ	10.8-13.2	15	67	1500	220	80
AM1PS-2403S-NZ	21.6-26.4	3.3	303	1500	220	76
AM1PS-2405S-NZ	21.6-26.4	5	200	1500	220	80
AM1PS-2409S-NZ	21.6-26.4	9	110	1500	220	80
AM1PS-2412S-NZ	21.6-26.4	12	83	1500	220	81
AM1PS-2415S-NZ	21.6-26.4	15	67	1500	220	82
AM1PS-2424S-NZ	21.6-26.4	24	42	1500	220	82

‡ Please note Aimtec product change announcement located here www.aimtec.com/news for product specification changes effective February 7th 2015.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	3.3	2.97-3.63		VDC
	5	4.5-5.5		
	12	10.8-13.2		
	15	13.5-16.5		
	24	21.6-26.4		
Absolute Max Rating (1 sec. max.)	3.3		5	VDC
	5		9	
	12		18	
	15		21	
	24		30	
Filter	Capacitor			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		20		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See tolerance graph	±5		%
Short Circuit protection		Continuous with automatic recovery ‡		
Line voltage regulation	For 1.0% Vin, 3.3V Model For 1.0% Vin, Other Model	±1.5 ±1.2		% of Vin
Load voltage regulation	Load 10 – 100%	12		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	At 20 MHz Bandwidth	60		m Vp-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100 - 300		KHz
Operating temperature	Derating above 85°C	-40 to +105		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			125	°C
Cooling		Free air convection		
Humidity	Non condensing		95	%
Case material		Plastic UL94-VO		
Lead Soldering Temperature	1.5mm from Lead, 10 sec max.		300	°C
Weight		1.8		g
Dimensions (L x W x H)		0.50 x 0.39 x 0.32 inches	12.70 x 10.00 x 8.20 mm	
MTBF		>3500K hrs(MIL-HDBK -217F, Ground Benign, t=+25°C)		

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

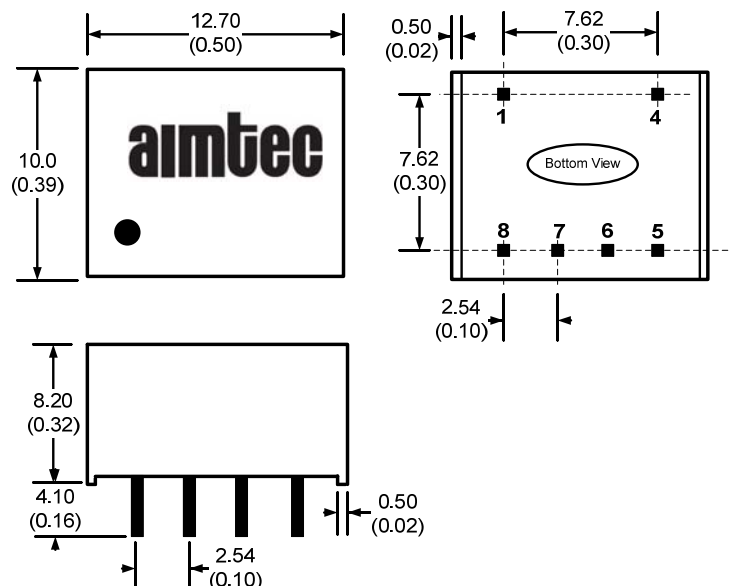
Safety Specifications

Parameters	
Agency approvals	cULus (without 3.3 input and output models)
Standards	UL 60950-1

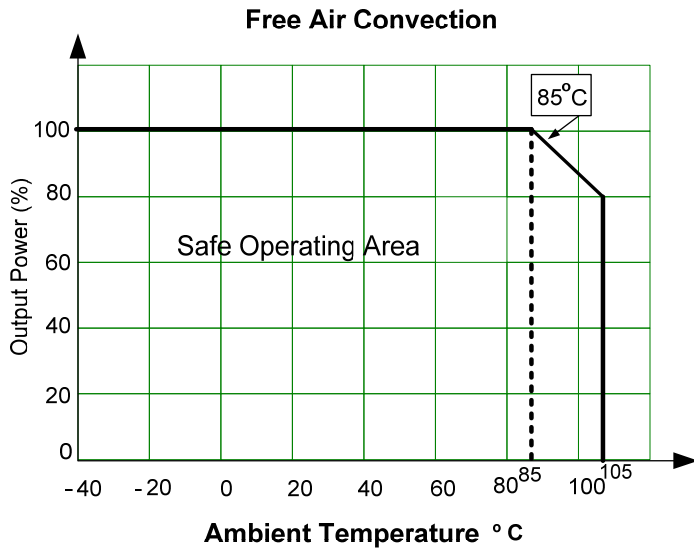
Pin Out Specifications

Pin	Single
1	- V Input
4	+V Input
5	+V Output
6	No pin
7	-V Output
8	No pin

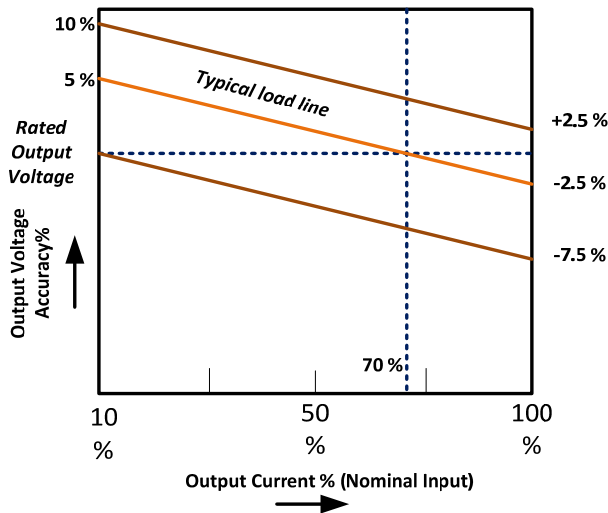
Dimensions



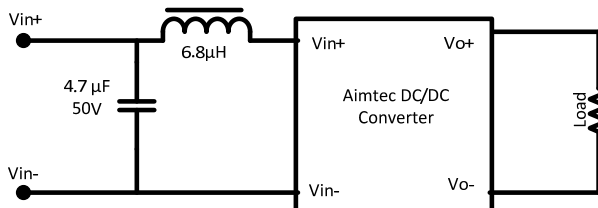
Derating



Typical Characteristics



Recommended Circuit for EMI Class B



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